



CASE PP/1-22278/P5/CGC 2069

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF  
SHENG-SHING LI ET AL  
APPLICATION NO: 10/045,391

Group Art Unit: 1771  
Examiner: **Jennifer A. Boyd**  
**Confirmation No. 2361**

FILED: **November 9, 2001**  
FOR: WETTABLE POLYOLEFIN FIBERS AND  
FABRICS

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION UNDER RULE 132**

Matthew Gande, the undersigned states:

That I received a Ph.D. in Chemistry from Cornell University, 1986;

That I have been employed by Ciba Specialty Chemicals Corporation and its predecessors since 1986;

That I have approximately 20 years of chemical research and development experience in the plastics additives area;

That from 1986 to date I have worked in the Research and Development laboratories of Ciba Specialties Chemical Corporation and its predecessors;

I consider myself to be an expert in this field;

That the following experiments were performed by me or under my supervision.

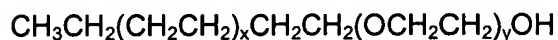
Concentrates of the various ethoxylated alcohols are prepared in polypropylene using a twin-screw extruder. Appropriate amounts of the concentrate are mixed with a meltblown grade PP in a Turbula blender. Nonwoven fabrics are prepared from the blends using a research-scale meltblown extruder equipped with a 6" (121 hole) die. The table below lists the weight percent ethoxylated alcohol additive by weight based on polypropylene.

Hydrophilicity is determined by observing the water absorption capacity of the fabrics: A 0.01m<sup>2</sup> disc is cut from the center of the fabric and weighed ( $w_i$ ). After being submerged in distilled water at room temperature for two minutes, the fabric sample is removed from the water bath and allowed to drain for 1 minute. The sample is then reweighed ( $w_f$ ). The liquid absorption capacity (LAC) is defined as:

$$LAC = 100\% \cdot (w_f - w_i) / w_i$$

<u>Ethoxylated Alcohol</u>	<u>LAC</u>
Blank (none)	45
3% UNITHOX 420	450
3% UNITHOX 480	280
3% UNITHOX 750	150

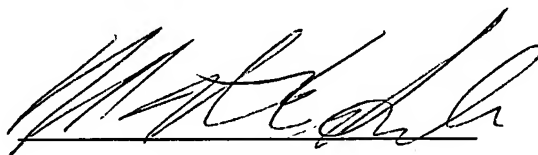
The structure of the UNITHOX products are as follows:



<u>Ethoxylated Alcohol</u>	<u>Average x/y</u>
UNITHOX 420	13/2.5
UNITHOX 480	13/42
UNITHOX 750	23/17

UNITHOX 420 surprisingly performs much better than other ethoxylated alcohols towards providing wettability to polyolefin fibers. This result is surprising and could not have been predicted.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

A handwritten signature in black ink, appearing to read 'Matthew Gande', written over a horizontal line.

Matthew Gande

10/24/06